

**REMARKS**

**Regarding "Drawings"**

Please note in the revised independent claim 1 below that the phrase "the pixelated-image display apparel" has been deleted (for ease of reference, a copy of claim 1 is included on this page, in addition to the copy attached in the revised specification). The deletion of this phrase obviates the need to revise any of the drawings.

Claim 1. Wearable pixelated apparel comprised of at least one highly flexible and lightweight pixelated material having a contiguous imaging surface comprised of a multitude of pixels, wherein

- a. at least one of said pixelated material is shaped to conform to a three-dimensional portion of a human body;
- b. said at least one pixelated material is equipped with a communications link to communicate with at least one image-playback / image-control apparatus;
- c. said image-playback / image-control apparatus is equipped to playback, control and shape display imagery in conformance with the size and the shape of said at least one pixelated material;

said apparatus comprising:

- at least one control circuit,
- at least one intelligent controller,
- at least one electronic power source,
- at least one input/output interface means to receive and send digital media content,
- at least one digital media content playback means,
- a user interface means for a user to communicate with said apparatus and to control the playback of at least one source of digital media content, and
- intelligent controller software responsive to user input from said user interface means.

**Explanation of Amendment of Claim 1:**

Figures 1A through 5 and the descriptions of the specification pertaining thereto, clearly support the amended phrase "at least one of said pixelated material is shaped to conform to a three-dimensional portion of a human body." For example, in reference to FIGS. 1A and 1B, the specification describes, two-dimensional apparel pattern pieces, or "segments": "the vest left-front segment 20 and vest right-front segment 22 seen in Fig. 1A, and the vest left-rear segment

16 and vest right-rear segment 18 seen in Fig. 1B” (pg. 9, line 31 through pg. 10, line 1). These apparel segments are “adjoined at adjoining edges as seen in Fig. 1C” (pg. 10, line 3) in a manner which conforms to a three-dimensional portion of a human body. Similarly, it is evident that the two-dimensional segments of FIGS. 2A and 2B (e.g., front and back skirt pattern pieces) are shaped to conform to the three-dimensional form of 2C. To those familiar with the art of apparel making, the conversion of such two-dimensional pattern pieces or segments, into three-dimensional wearable items of apparel conforming to a three-dimensional portion of a human body, is well known.

In addition to one or more pixelated material being “shaped to conform to a three-dimensional portion of a human body,” the specification clearly describes image display means for shaping of display images to the particular shapes of apparel pattern pieces or segments, which support Claim 1 excerpt: “...image-playback / image-control apparatus is equipped to playback, control and shape display imagery in conformance with the size and the shape of said at least one pixelated material...”:

Page 10, lines 9-12 “Apparel segments are linked to one another by suitable electronic coupling means 50 and receive video signal from video display apparatus 52 via display transmission means 54 such that custom formatted video content (sized and shaped according to one or more video-receiving apparel segment) can be imaged thereon.”

Page 12, 14-16 “...code is readable by and transmittable via microcontroller 106 to video input control and formatting means 104 which selects (switches) and provides correctly-formatted video content that fits the size and shape of each apparel segment, or apparel-whole.”

The combination of one or more apparel segments which conform(s) to a three-dimensional portion of a human body, and the display imagery apparatus which shapes displayable imagery particular to the shape of apparel segment(s), is a key feature of the novelty of the invention claimed in the independent claim (of claim 1).

**Regarding Rejection of Claims 1, 2, 12, 15, and 19-28 as being unpatentable over Albert et al (6,252,564) in view of Fitch (5,912,653) and Usada (5,455,906) 35 U.S.C. 103(a):**

Albert et al, Fitch and Usada do not teach, illustrate or claim image display means for providing:

1. Displayable pixelated imagery which is “sized and shaped,” and / or “correctly-formatted,” to conform to the shapes peculiar to one or more entire apparel segments, or
2. “Highly flexible and lightweight pixelated material...shaped to conform to a three-dimensional portion of a human body.”

The patents of Albert et al and Fitch, for example, each show only one example of a “wearable display patch 502” (depicted in FIG. 9 of Albert) and a rigid flat panel “LCD 12” (FIG. 1 of Fitch) shown as a subset of the apparel material making up a jacket. While it may be possible to provide such a display “patch” (502) on the sleeve of a jacket and “electronics necessary for addressing the display 502,” or a rigid LCD panel 12 which communicates with typical LCD display electronics, it is not obvious in the descriptions of the Albert or Fitch specification how

such display formatting electronics could be employed to shape, or correctly format, contiguous display imagery peculiar to the shape of entire apparel segments, and / or entire adjacent apparel segments. Moreover, the display electronics of Albert et al and Fitch, do not address how to contiguously display imagery on adjacent entire apparel segments, or across one or more seams of adjacent entire apparel segments.

While Albert et al state that their material is suitable for "incorporation into" various articles of clothing and other wearable items, it is one thing to vaguely state such a thing, and quite another, in the context of a patent application, to support how such a thing is structurally and operationally achieved.

Reference to how Albert et al imagery might be electronically formatted or shaped (other than with conventional methods) is so vague, that it is very difficult to discern what if anything, structurally and operationally pertaining to image 'shaping', would be considered inventive. Additionally, Albert et al seem to place an emphasis on the formatting of display imagery onto displays that are known for having a rectangular shape. The full extent of Albert et al electronics that might be considered applicable to image display formatting, is limited to just one sentence, which merely states:

Column 19, lines 19 through 22) "The electronic display 1004 can operate by principles known to the art of LCDs, Plasma displays, CRTs, electrophoretic displays or encapsulated electrophoretic displays."

"LCDs, Plasma displays, CRTs" are rectangular in shape and display apparatus providing display signals thereto send signals formatted for rectangular screens. "Electrophoretic displays or encapsulated electrophoretic displays" have not yet been successfully commercialized. Thus, imagery shaping capability providing display imagery in a format which is peculiar to (1) the shapes of apparel segments, or (2) the display of contiguous imagery across a plurality of adjacent apparel segments, cannot be considered obvious.

The present application anticipates that when highly flexible and lightweight pixelated materials become commercially available (of which, the Albert et al material is only one type), it will be preferable to make numerous types of apparel out of such material by sizing and shaping entire apparel segments from the material and that it will therefore be necessary:

- 1.) to have image display processing and formatting means for sizing and shaping pixelated imagery which conforms to the shapes peculiar to one or more entire apparel segments, or to "highly flexible and lightweight pixelated material...shaped to conform to a three-dimensional portion of a human body."
- 2.) to provide one or more entire apparel segments with a communications link; and pluralities of entire apparel segments with a coupling means; for electronically interconnecting the apparel segments together, in a manner which contiguous graphic display imagery and / or video imagery will appear on the entire apparel segment(s) or on a plurality of entire apparel segments.
- 3.) And to provide seam-forming techniques to create reliable and durable seams within, or between, one or more perimeter portion of entire apparel segments.

The reference made to the Usada invention, which provides the means to format display imagery 'insets' on a flat "electronic board" is not relevant to the present patent application. The latter, rather than seeking to reduce the shape and / or area of the display imagery appearing on a display material, or attempting to claim image 'insets' or reduced image areas as proprietary, instead seeks to shape display imagery peculiar to the shape of one or more entire apparel segments which has / have been shaped to conform to a three-dimensional portion of a human body.

As noted in the office action, "Albert et al as modified fail to disclose imagery according to the size and shape of at least one pixelated material (apparel-wole)." Page 3.

Albert et al, Fitch and Usada separately, or combined, do not teach, illustrate or claim the novel image display means described above and in the present patent application. More specifically, the cited patents do not provide display means having (1) displayable pixelated imagery which is "sized and shaped," and / or "correctly-formatted," to conform to the shapes peculiar to one or more entire apparel segments, or (2) "highly flexible and lightweight pixelated material... shaped to conform to a three-dimensional portion of a human body."

Thus, the applicant respectfully submits that the present invention, in view of the attached amended claim 1 (derived specifically from the written specification and related drawings), is unobvious and novel, and therefore, the amended independent claim and all claims dependent thereto should be allowed.

#### **Additional Office Action Issues Page 4 and 5**

The office action states near the top of page four that "As to claims 2, 12, 15 and 26, Albert et al teach at least one portion of perimeter edge of the pixelated material segments is adjoined (zipper or tongue-in-groove fastener) to at least one portion of perimeter edge of another segment (see figures 8A-8D column 17, lines 1-8)." The applicant was unable to find any reference to a "zipper or tongue-in-groove fastener" in the in the cited reference: column 17, lines 1-8, wherein, Albert et al describes their "tiles" being "...connected to each other using standard electronics connectors 805 placed on the edge of the tiles 801 as shown in FIGS. 8A-8D." And in the next sentence describes, the tiles being "...connected to each other using cables." However, it is noted that the present patent application does not seek to adjoin or seal apparel segments together in such a fashion. Apparel segments can be electronically coupled together for image presentation purposes, but such coupling is neither described, nor intended to be used, as a replacement for durable and reliable seams.

In reference to the issues cited in the office action pertaining to:

1. claim 19 "optical communicatons" (Albert);
2. claim 21 "pre-recorded material playback device" (Fitch); and
3. claims 22-25 content comprising video games, advertisements and promotional messages (Albert)

the applicant respectfully submits that these issues are obviated by the novelty and unobviousness of the present invention described above and by the allowance of the amended claim 1 also referred to above.

1  
2 As noted in the office action, "...claims 3-11, 13, 14 and 16-18, Albert et al as modified fail to  
3 disclose a heat-sealed, sonic-weld, joint or hook-and-loop fastener, stapled joint, lued or adhesive  
4 joint, riveted joint, button-hole joint sewed or stitched seam joint or knotted seam joint."

5  
6 In reference to the issues cited in the office action rejecting claims 3-11, 13, 14 and 16-18, as  
7 being obvious 35 U.S.C. 103(a) over Albert et al, Fitch, Usuda and Bastiaens, the applicant  
8 respectfully submits that these issues are obviated by the novelty and unobviousness of the  
9 present invention described above and by the allowance of the amended claim 1 also referred to  
10 above.

11  
12 The prior art of record and not relied upon, are duly noted.

13  
14 In conclusion, the combination of one or more apparel segments comprised of one or more  
15 highly flexible pixelated material, and which is / are shaped to conform to a three-dimensional  
16 portion of a human body; and the display imagery apparatus which shapes displayable imagery  
17 particular to the shape of apparel segment(s), are key features of the novelty of the invention  
18 claimed in the amended independent claim (of claim 1) and are not met individually or  
19 collectively by the Albert et al, Fitch, Usuda and Bastiaens patents. The prior art also do not  
20 teach, illustrate or claim image display means for providing: displayable pixelated imagery  
21 which is "sized and shaped," and / or "correctly-formatted," to conform to the shapes peculiar to  
22 one or more entire apparel segments, or "Highly flexible and lightweight pixelated  
23 material...shaped to conform to a three-dimensional portion of a human body." Therefore, as  
24 stated in the sections above that differentiate these claims from the structure and operation  
25 specific to the prior art, independent claim 1 (and by inference, its dependent claims) should be  
26 allowed.

27  
28 In the event that the examiner feels that a modification of the amended claim 1, or variant  
29 thereof, can be provided which will be acceptable in view of the explanations above, and in view  
30 of the intent and scope of the present invention, the applicant sincerely requests that the examiner  
31 provide such a claim, or claims, in writing.

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33 Respectfully submitted,

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